ABSTRACT OF THE DISCLOSURE

There is provided a semiconductor module that can be easily manufactured and has a photosensitive element. A minute unevenness portion is formed over the entirety or a portion of the region except for a light receiving portion in a mold for forming a module. Thus, a minute unevenness portion is formed over the entirety or a portion of the region except for the light receiving portion on the surface of the module. This module is immersed into a solution containing a light shielding material to deposit the film containing the light shielding material in the unevenness portion. The module in which the film is deposited is thermal-treated, and thus the module in which the film containing the light shielding material is deposited over the entirety or a portion of the region except for the light receiving portion can be manufactured.